

REMARKS

I. Introduction

In the Office Action, claims 1-6, 13, 15-18 and 25-30 have been examined.

The Examiner withdraws the indicated allowability of claims 2 and 18 in view of the newly discovered reference: European Patent Application EP 0727375 issued to Orbons et al. (hereinafter "Orbons"). However, claim 16 remains allowed. Furthermore, the Examiner still acknowledges that claims 3 and 4 contain allowable subject matter.

Claims 1-2, 5-6, 13, 15, 17-18 and 25-30 are rejected. Specifically, claims 1, 5 and 6 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Yamada et al., U.S. Patent No. 5,838,354 (hereinafter "Yamada"); claims 13, 18 and 25-30 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Orbons; claim 2 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yamada in view of Orbons; claims 13 and 17 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over McCulley, U.S. Patent No. 938,885 (hereinafter "McCulley") in view of Smedal, U.S. Patent No. 1,128,730 (hereinafter "Smedal"); and claim 15 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hageman, U.S. Patent No. 2,300,276 (hereinafter "Hageman") in view of Metzner, U.S. Patent No. 2,904,332 (hereinafter "Metzner").

Applicant overcomes these claim rejections as follows.

II. Allowable Subject Matter

Claim 16 is allowed. Furthermore, the Examiner acknowledges that claims 3 and 4 contain allowable subject matter but objects to claims 3 and 4 as being dependent upon a rejected base claim. Claims 3 and 4 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, in view of the following remarks relating to claim 1, Applicant submits that claims 3 and 4 are allowable without being rewritten in independent form.

III. Claim Rejections -- 35 U.S.C. § 102

Claims 1, 5 and 6

Claims 1, 5 and 6 stand rejected under § 102(e) as allegedly being anticipated by Yamada.

Claim 1 recites, *inter alia*, "a paper feeding unit . . . located at a height that enables a user standing in front of the printer to execute the paper feeding process including replacement of the roll paper and setting the sheet of paper". The Examiner continues to allege that Yamada discloses these features of claim 1, for example, in Fig. 29. To the contrary, Fig. 29 of Yamada merely illustrates the outer appearance of an image forming apparatus. Yamada fails to disclose or suggest any relationship between a located height of a paper feeding unit and a user standing in front of the printer. Indeed, the static image conveyed by Fig. 29 of Yamada does not include an illustrated user therein for reference (*cf.*, Applicant's Fig. 1).

Furthermore, the Examiner continues to allege that Yamada discloses "a paper feeding unit operable to feed at least one roll of paper and at least one sheet of paper including a stiff

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carton ", as recited in claim 1. Applicant disagrees with the Examiner's reasoning for at least the reasons set forth in Applicant's Amendment of February 25, 2003. However, in the interest of expediting prosecution of the application, Applicant amends claim 1 to recite "a paper feeding unit operable to feed at least one roll of paper and at least one substantially flat sheet of paper including a stiff carton". This amendment further distinguishes between the recited roll of paper and sheet of paper.

Thus, claim 1 is not anticipated by Yamada for at least the above exemplary reasons as well as the exemplary reasons set forth in Applicant's Amendment of February 25, 2003. Consequently, claims 5 and 6 are not anticipated by Yamada, at least by virtue of their dependency.

Claims 13, 18 and 25-30

Claims 13, 18 and 25-30 stand rejected under § 102(b) as allegedly being anticipated by Orbons. Claims 25 and 27-30 are canceled without prejudice or disclaimer.

A. Claim 13

The Examiner alleges that claim 13 is anticipated by Orbons. Applicant respectfully disagrees.

Applicant amends claim 13. Applicant respectfully submits that these amendments are not intended to narrow the scope of the original claim. Accordingly, these amendments do not foreclose application of reasonable equivalents.

Claim 13 recites, *inter alia*, "a sheet feeding area positioned at a height at which a user, who is approximately 170 cm tall, can set up a printing medium without having to bend

substantially at the waist when the user is standing erect in front of the printer and standing substantially at ground level".

Orbons describes an image-forming apparatus having a support for a roll of receiving material. In particular, Orbons describes an image-forming apparatus that provides a place for fitting a spindle into the core of a roll of receiving material at a working height of a standing operator (Orbons: col. 2, lines 5-9). Thus, Orbons describes a worktop 33 which is adapted to facilitate the insertion and removal of a spindle 31 into the roll core 30 of a roll receiving material 16, 17, 18 or 19 (Orbons: col. 3, lines 30-40; Fig. 2).

Conversely, the feed unit 2 of Orbons is not "positioned at a height at which a user, who is approximately 170 cm tall, can set up a printing medium without having to bend substantially at the waist when the user is standing erect in front of the printer and standing substantially at ground level", as recited in claim 13. Orbons describes a feed unit 2 situated below a process unit 1 (Orbons: col. 2, lines 43-44). The feed unit 2 comprises two drawers 14 and 15 disposed one above the other (Orbons: col. 2, lines 45-46). Furthermore, each drawer contains two roll holders for rotatably receiving rolls of receiving material 16 and 17; 18 and 19, respectively (Orbons: col. 2, lines 46-48).

Therefore, after insertion of the spindle 31 into the roll core 30, as described above, Orbons requires a user to take hold of the roll of receiving material on either side in order to place the roll in the required place in the drawer 14 or 15 (Orbons: col. 2, lines 54-59). Indeed, Orbons expressly discloses that the user must bend in order to introduce the roll, which would appear to be obvious from Fig. 1 of Orbons as well (Orbons: col. 5, lines 2-7; Fig. 1).

For at least these exemplary reasons, claim 13 is not anticipated by Orbons.

B. Claim 18

Like claim 13, claim 18 recites "a sheet feeding area positioned at a height at which a user standing in front of the printer can set up a printing medium without having to bend substantially at the waist, wherein the sheet feeding area is positioned at the height when the printer is placed substantially at ground level". Thus, claim 18 is not anticipated by Orbons based on a rationale similar to that set forth above for claim 13.

Additionally, Applicant amends claim 18 to recite, *inter alia*, "a paper feeding path which extends straight in a vertical direction from the paper feeding area to the paper discharge area via the printing area". Applicant respectfully submits that these amendments are not intended to narrow the scope of the original claim, but are rather for precision of language and to explicitly recite within the claim what was believed to have already been implicitly defined therein. Accordingly, these amendments do not foreclose application of reasonable equivalents.

Orbons fails to disclose or suggest a paper feeding path which extends straight in a vertical direction from a paper feeding area to a paper discharge area via the printing area.

For at least these exemplary reasons, claim 18 is not anticipated by Orbons.

C. Claim 26

The Examiner alleges that claim 26 is anticipated by Orbons. Applicant amends claim 26 to further clarify that the sheet feeding area is "operable to feed a plurality of paper rolls ranging in width from 210 mm to 1120 mm and a substantially flat sheet of paper including a stiff carton ranging in length from 420 mm to 730 mm".

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Orbons fails to disclose or suggest a sheet feeding area operable to feed a plurality of paper rolls of the recited dimensions (widths) and a substantially flat sheet of paper of the recited dimensions (lengths). Consequently, claim 26 is not anticipated by Orbons.

IV. Claim Rejections -- 35 U.S.C. § 103

Claim 2

Claim 2 stands rejected under § 103(a) as allegedly being unpatentable over Yamada in view of Orbons.

Claim 2 depends from claim 1. Since Orbons fails to make up for the deficiencies of Yamada described above with respect to claim 1, claim 2 is patentable over a reasonable combination of Yamada and Orbons, if any, at least by virtue of its dependency.

Claims 13 and 17

Claims 13 and 17 stand rejected under § 103(a) as allegedly being unpatentable over McCulley in view of Smedal.

Applicant respectfully submits that claims 13 and 17 are patentable over McCulley and Smedal for at least the exemplary reasons set forth in Applicant's Amendment of February 25, 2003. Applicant addresses the Examiner's response to these reasons as follows.

In response to the argument that Smedal fails to teach or suggest "a sheet feeding area positioned at a height where a user, who is approximately 170 cm tall, can set up a printing medium without having to bend substantially at the waist when the user is standing erect in front of the printer and standing substantially at ground level", as recited in claim 13, the Examiner

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alleges that Smedal discloses that the printing medium can be set at any vertical height so long as it is supported by post 2. Applicant respectfully disagrees.

A reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach (MPEP § 2111). The post 2 of Smedal is a hollow post fixed rigidly to the pedestal and adapted to receive and support the legs of the frame which carries the paper roll frame. To the extent that the post 2 supports the rolls of paper, the Examiner's interpretation of the post being any height is unreasonable. Indeed, it follows that a relationship between the weight of the rolls of paper and the ability of the hollow post to support such a weight would vary depending on the height of the post.

Furthermore, the arguments that Smedal represents non-analogous art flow therefrom. In response to this line of reasoning, the Examiner alleges that a typewriter is a printer and the claims do not contain any language limiting the overall dimensions of the apparatus. However, again Applicant notes that a reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach (MPEP § 2111).

Indeed, as noted in Applicant's Amendment of February 25, 2003, typewriters do not generally suffer from the problems encountered by large printers. For example, typewriters would not require a deeper installation space for replacing a paper roll or require that a user replace a heavy roll of paper. *See, e.g.*, Applicant's page 1, line 1 to page 2, line 19. These exemplary differences, *i.e.*, the size of the printer and weight of the rolls of paper, would directly impact what constitutes a reasonable size/height of the post 2 of Smedal.

Therefore, to the extent that McCulley and/or Smedal represent non-analogous art, the rejection of claims 13 and 17 under § 103(a) is improper. In response, the Examiner alleges that "aside from attorney's arguments, the applicant has not presented any evidence of this assertion". Contrary to the Examiner's allegation, Applicant's specification clearly describes the aforementioned exemplary problems encountered by large printers (*see, e.g.*, Applicant's Specification at page 1, lines 5-7; page 1, lines 8-12; page 1, line 25 to page 2, line 5; page 2, lines 12-19; page 2, line 23 to page 3, line 5; and Figs. 1 and 4).

In view of the above, Applicant respectfully submits that a reasonable combination of McCulley and Smedal, if any, would not render the subject matter of claim 13 obvious. Consequently, claim 17 is patentable over McCulley and Smedal as well, at least by virtue of its dependency.

Claim 15

Claim 15 stands rejected under § 103(a) as allegedly being unpatentable over Hageman in view of Metzner.

In response to the numerous exemplary distinguishing features between claim 15 and the applied references, as provided in Applicant's Amendment of February 25, 2003, the Examiner responds by continuing to allege that housing 45 and guide plate 42 of Hageman, as well as guide member 23 of Metzner, render the recited cover member obvious. Applicant respectfully disagrees.

As noted in Applicant's Amendment filed on February 25, 2003, Hageman fails to teach or suggest "a cover member, which covers a first feeding path for the roll of paper from above", as recited in claim 15. The Examiner responds by alleging that the strip guiding plates 42 and

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the housings/spools 45 of Hageman disclose the recited cover member, "which covers a first feeding path for the roll of paper from above".

Applicant respectfully disagrees. Hageman describes a housing/spool 45 surrounding a carbon supply roll 46 (the record strips S are not so surrounded), and a separate guide plate 42. *See, e.g.*, Fig. 4 of Hageman. However, neither housing 45 nor guide plate 42, either alone or in combination, "covers a first feeding path for the roll of paper from above". Indeed, both a record strip S and a carbon strip C follow a feeding path (above support rail 48) which is uncovered. *See, e.g.*, Fig. 4 of Hageman.

Furthermore, the Examiner acknowledges that Hageman fails to teach or suggest that "the cover member extends linearly from an upstream portion thereof to a downstream portion thereof in connection with a direction in which the sheet of paper is fed" or that "the cover member is disposed between the sheet of paper and the roll of paper at a location in the sheet feeding area at which the roll of paper is in a rolled shape", as recited in claim 15. The Examiner alleges that Metzner makes up for these deficiencies of Hageman.

The Examiner alleges that Metzner describes a cover member 23 that extends linearly from an upstream portion to a downstream portion in which a sheet of paper is fed and that the cover member is disposed between a sheet of paper and a feed pack at a location in the feed pack area for the purpose of continuously supporting the paper from the pack to the printing area. Metzner describes separating a record strip material 14 into its component parts, each of which is directed into a separate chute defined by downwardly and rearwardly inclining deflector guides

22 and 23. *See, e.g.*, Fig. 1 of Metzner. Metzner fails to make up for the deficiencies of Hageman for at least the following illustrative reasons.

First, Metzner fails to teach or suggest that "the cover member extends linearly from a upstream portion thereof to a downstream portion thereof in connection with a direction in which the sheet of paper is fed", as recited in claim 15. Metzner fails to teach or suggest a cover member. The deflector guides 23 relied on by the Examiner are for guiding the component parts of the record strip material 14 (after recording) into the appropriate chutes. *See, e.g.*, Fig. 1 of Metzner. Furthermore, Metzner describes feeding a pack of series connected record forms 13 (supported by a shelf 12) into a recording machine 11. *See, e.g.*, Fig. 1 of Metzner. However, the deflector guides 22 and 23 extend from an upstream portion to a downstream portion in a direction opposite to the direction in which the sheet of paper is fed. *See, e.g.*, Fig. 1 of Metzner.

Second, Metzner fails to teach or suggest that "the cover member is disposed between the sheet of paper and the roll of paper at a location in the sheet feeding area at which the roll of paper is in a rolled shape" (emphasis added). The Examiner alleges that Metzner discloses a cover member that is disposed between a sheet of paper and a feed pack at a location in the feed pack area for the purpose of continuously supporting the paper from the pack to the printing area. Even assuming *arguendo* that the Examiner's assertion is correct, Metzner still fails to teach or suggest the claimed invention. Metzner describes a pack of series connected record forms 13 and not a roll of paper. Indeed, the use of these series connected forms appears to facilitate the collection of used record strip elements R on depressed portions 24 against uprights 25, whereas previously rolled paper would be difficult to collect in this manner. *See, e.g.*, Fig. 1 of Metzner.

In response to the Examiner's allegation that "Metzner discloses a cover member (23) that is above [the] sheets", Applicant notes that the purpose of the deflector guides 23 of Metzner is to separate the record strip material 14 into its component parts (elements R and C). *See, e.g.*, col. 2, lines 38-72 of Metzner. Therefore, the deflector guides 23 do not cover the sheets as alleged by the Examiner, but instead, run somewhat parallel to a collection path of the record strip elements R, while carrying the carbon strip elements C. *See, e.g.*, Fig. 1 of Metzner.

Additionally, Hageman and Metzner, either alone or in combination, fail to teach or suggest the features of "a sheet feeding area operable to feed at least one roll of paper and at least one sheet of paper toward a printing unit at which printing is performed thereon" and "wherein the cover member extends linearly from an upstream portion thereof to a downstream portion thereof in connection with a direction in which the sheet of paper is fed at the sheet feeding area", as recited in claim 15.

For example and not by way of limitation, Metzner fails to teach or suggest that "the cover member extends linearly from an upstream portion thereof to a downstream portion thereof in connection with a direction in which the sheet of paper is fed at the sheet feeding area", as recited in claim 15. In Metzner, the deflector guides 22 and 23 are guide members for discharging used record strip elements R and carbon strip elements C from the printing unit, *i.e.*, away from the recording machine 11.

Thus, for at least the above exemplary reasons, a reasonable combination of Hageman and Metzner, if any, would not render the embodiment of claim 15 obvious.

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V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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PATENT TRADEMARK OFFICE

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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 25 and 27-30 are canceled.

The claims are amended as follows:

1. (Thrice Amended) A large printer comprising:

a paper feeding unit operable to feed at least one roll of paper and at least one substantially flat sheet of paper including a stiff carton, the paper feeding unit being located at a height that enables a user standing in front of the printer to execute the paper feeding process including replacement of the roll paper and setting the sheet of paper;

a printing unit located below the paper feeding unit,

a discharged paper stacking unit located below the printing unit; and

a paper feeding path extending in a substantially straight line from the paper feeding unit to the discharged paper stacking unit via the printing unit.

13. (Six times amended) A large printer comprising:

a sheet feeding area positioned at a height at which a user, who is approximately 170 cm tall, can set up a printing medium without having to bend substantially at the waist when the user is standing erect in front of the printer and standing substantially at ground level, ~~the sheet feeding area being operable to feed a printing medium having a width in a range from 210 mm to 420 mm;~~

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wherein the sheet feeding area is positioned at the height when the printer is placed substantially at the ground level,~~and~~

~~wherein a plurality of paper rolls are loaded in the sheet feeding area so as to be arranged obliquely relative to each other in the vertical direction.~~

16. (Twice Amended) A large printer comprising:

a sheet feeding area positioned at a height at which a user standing in front of the printer can set up a printing medium without having to bend substantially at the waist,

wherein the sheet feeding area is positioned at the height when the printer is placed substantially at ground level,~~and~~

~~wherein a plurality of paper rolls are loaded in the sheet feeding area so as to be arranged obliquely relative to each other in the vertical direction;~~

wherein an elongative member disposed in the paper feeding area for holding the printing medium; and

wherein a pair of support members for supporting both ends of the elongative member, at least one of the support members being rotatable.

18. (Twice Amended) A large printer comprising:

a sheet feeding area positioned at a height at which a user standing in front of the printer can set up a printing medium without having to bend substantially at the waist, wherein the sheet

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feeding area is positioned at the height when the printer is placed substantially at ground level,
and

~~wherein a plurality of paper rolls are loaded in the sheet feeding area so as to be arranged
obliquely relative to each other in the vertical direction;~~

a printing area;

a paper discharge area; and

a paper feeding path which extends straight in a vertical direction from the paper feeding
area to the paper discharge area via the printing area.

26. (Amended) A large printer comprising:

a sheet feeding area operable to feed a plurality of paper rolls ranging in width ~~printing~~
~~medium having a width in a range from 210 mm to 1120 mm~~ and a substantially flat sheet of
paper including a stiff carton and ranging in length from 420 mm to 730 mm;

~~wherein a plurality of paper rolls are loaded in the sheet feeding area so as to be arranged
obliquely relative to each other in the vertical direction.~~